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Original

PROGRESS OF MEDICO-LEGAL SURGERY.

BY CLARK BELL, ESQ., LL. D.,

Honorary Member International Association of Railway Surgeons, Honorary Member New York State Association of Railway Surgeons, President International Congress of Medical Jurisprudence.

In considering medico-legal surgery I shall treat it under three seperate heads, "Military Surgery," Naval Surgery" and "Railway Surgery."

Recent events, which have unfortunately resulted in a war between the United States of America and Spain, into which the American Government has just entered, and is devoting its highest energies, will give additional interest to a study of the first two of three subdivisions, military and naval surgery, which for the present purpose may be considered together.

MILITARY AND NAVAL SURGERY.

Military Surgery.

In all countries the military surgeon forms a fixed and distinct arm of the service of the army of the nation, and its relation to medico-legal science has been well defined in the past in the service of the American Government.

The army Medical Department, as organized in the American Government, constitutes one of the bureaus of the War Department, and is composed of one Surgeon General, with the rank of brigadier general; six surgeons, with the rank of colonel, and styled Assistant Surgeon General; ten surgeons with the rank of lieutenant colonel, styled Deputy Surgeon General; 50 surgeons with the rank of major and 110 assistant surgeons. All assistant surgeons enter the corps by competitive examination, and are commissioned as first lieutenants; after five years, and upon passing successfully the required examination, they are promoted to the rank of captain. Promotion throughout the corps is by

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seniority. There are no regimental surgeons, but medical officers for posts, armies and commands are detailed for whatever duty may be required.

The Medical Department of the army also comprises the hospital corps, made up of hospital stewards, acting hospital stewards and privates, the number of each determined by the necessities of the service. The hospital corps is divided among the several posts where troops are stationed, and in force proportionate to the size of the post.

The army medical officer of whatever grade is a regularly commissioned staff officer, appointed by the President and confirmed by the Senate, holding his commission for life unless deprived of same by sentence of court-martial. The Medical Officer cannot assume command except in his own department, but by virtue of his commission he may command all enlisted men like other commissioned officers. Medical officers, by virtue of commission, are entitled to sit on courts-martial, boards of inquiry or other boards or commissions, taking their places by seniority.

Each military department is entitled to a medical officer on the department staff, known as the Chief Surgeon of the department, and in times of war, or of active field duty, a Chief Surgeon of an army, army corps, or division is detailed to duty with the general officer commanding such forces.

A more specific and detailed account of the duties, etc., of medical officers of the army is contained in the "Army Regulations, U. S. A." "A Circular of Information for Candidates Seeking Appointment in the Medical Corps of the United States Army" can be obtained on application to the Surgeon General's Department of the Army. (Vide also "Medical and Surgical History of the War of the Rebellion," "Buck's Reference Handbook on the Medical Sciences," Vol III, pp. 105 et seq.; Ibid. Vol IX, Supplem 640 et seq.; "Piecher's First Aid to the Wounded;" "Index Catalogue," Library of the Surgeon General's office; "Taylor's Medical Jurisprudence," 12th American edition, Lea Brothers & Co., Phila.)

In the several American States the National Guard has attached to it the regimental surgeon as the basis of its system.

The Association of Military Surgeons of the United States.

In the United States of America the military surgeons of the country have united in an organization—The Association of Military Surgeons of the United States—which embraces all branches of surgeons connected with the regular army and navy, as well as the military surgeons connected with the National Guard of the several States of the American Union. This body meets annually to consider questions connected with military surgery, and its contributions to the literature of this branch have been most important, and form a valuable contribution to the literature of military and naval surgery.

The National Guard of the States.

The medical service in the National Guard of the several States of the American Union is organized under the State laws of the States upon a wholly different system. Each State has in its National Guard a Surgeon General, who is the highest officer in the medical service of the State. The basis of the practical service is a regimental surgeon to each regiment. Each regiment has its own surgeon, and in the great army now organizing to carry on the war with Spain the call has been made by the President upon the Governors of the several States, who have thus far each furnished their quota from the National Guards of the several States, under the regimental system and a surgeon goes with each regiment of the volunteer force of the American army.

In Great Britain, France, Germany, Italy, Spain and the continental countries, the army regulations in each nation fix the status, powers, duties and responsibilities of the army surgeon.

Naval Surgery.

The medical jurisprudence of naval surgery does not materially differ from that of army surgery, but

it is perhaps proper to speak of it by itself.

The Medical Corps of the American Navy is allowed by statute law a membership of 170. The corps is divided into five grades, to wit: Medical director, medical inspector, surgean, passed assistant surgeon and assistant surgeon, which have the relative rank respectively of captain, commander, lieutenant-commander, lieutenant and lieutenant junior grade, and ensign.

Admission to the corps is based entirely upon merit as determined by examination before a board of medical officers, carefully selected for this purpose. A copy of circular showing scope of examination can be obtained on application to the Surgeon General of the United States Navy. When a candidate is successful before the board he is commissioned by the President, by and with the consent of the Senate, as an assistant surgeon, with the relative rank of ensign. After three years' trial in the service as an assistant surgeon he is examined by the Medical Examining Board for promotion to the grade of passed assistant surgeon. In the event of failure he is again examined at the expiration of another year, and should there be a second failure he is dropped from the naval service. On promotion to passed assistant surgeon a new commission is issued by the President. Promotion from the grade of passed assistant surgeon and the other higher grades is by seniority, after examination before a board of medical officers.

The rank of the members of the Medical Corps, while conferred in the same manner as in the case of the members of the line corps, is relative, and in two grades, as shown above; there may be two ranks in the same grade, depending upon promotion in the line corps.

In Great Britain and in most foreign countries the naval surgeon occupies a similar position in relation to the service of his government in the department of the navy; and the officers of both arms of the service usually unite in practical recognition in army and navy clubs and in the united service of both branches of the service on land and water, which is also true of the Dominion of Canada and the colonial dependencies of the English crown.

Railway Surgery.

Railway surgery has become by far the most important branch of surgery in its relation to medical jurisprudence, when considered in its volume and as affecting the great body of the people, especially in the United States of America. The evolution of the railway system, especially upon the North American continent (which now has more miles of railway almost than all other countries combined) has in its train, and as a necessity, wrought radical changes, to both the legal and the medical professions, and has brought nearly every inhabitant in the United States of America and the Dominion of Canada into new and at the same time more immediate and direct communication and relation to and with the management of railways. The railway has revolutionized commerce, manufactures, mining, agricultural production and development, and indeed every branch of human industry. All manufactures, all products, are now brought to the market by the railway. It has superseded all other methods of travel or transportation where distance is a factor, and has become to the body politic—the State—what the arterial and venous circulation is to the human structure. In 1891 the Dominion of Canada had completed and in operation 14,000 miles of railways, while the United States had 214,000 miles, including double tracks and sidings. An enormous impetus and increase has since constantly occurred (Med.-Legal Jour., xi, p. 37). Mr. Justice David J. Brewer, of the Supreme Court of the United States, in his address before the New York State Bar Association, stated that in 1893 there was $11,000,000,000 invested in railway property in the United States, whose shareholders in this country number less than 2,000,000 persons. (Med.-Legal Jour., vol. x, p. 404).

From an inexorable necessity, where the railways transport such vast numbers of the population, in

all the varied pursuits and business of men, accidents have become a part and feature of the system, and the well-equipped railway of the present day must almost of necessity have its surgical system and its legal system. Chief Surgeon C. W. P. Brock in his presidential address before the National Association of Railway Surgeons, in June, 1893, stated that "During the year ending June 30, 1891, 7029 persons were killed on railways in the United States, 40,910 injured. Of these 2660 employes were killed and 293 passengers, and of the total injured 26,140 were employes." (Med.-Legal Jour., vol. xi, p. 64.) There are a few railways who have perhaps not yet recognized this as indispensable, but only a few, and it may be stated as a truism that every first-class railway must have its legal advisers, attorneys and counsel, on the one hand, and its chief surgeon and surgical staff on the other. The railway that neglects to provide these two important adjuncts for its operation is not fully equipped for its work, and without proper surgical organization it would not only pay double what it should in accident and damage cases, but would not properly provide for the care of the wounded and sufferers from accidents, of its own employes in its practical operation. The railway counsel has long been a conceded and recognized factor in railway administration; the railway surgeon is quite as necessary, almost as important, and his field of duty is an outgrowth of the railway system, which is to a large extent a part of the growth and evolution of the railway itself. The railway surgeon has, in the United States of America, become a distinct and representative part of the medical profession, and he has come to stay, as a fixed part of our railway system.

SECTION OF MEDICO-LEGAL SURGERY (OF THE MEDICO-LEGAL SOCIETY).

The growing importance of railway surgery in medical jurisprudence was distinctly recognized by the Medico-Legal Society on September 6, 1893, by the organization of a section of medico-legal surgery, embracing railway counsel and railway, military and naval surgeons, under a chairman and 20 vice chairmen, selected, ten from each profession from the various States of the American Union. This action was based upon recommendation made in an address entitled "Railway Surgery in Law and Medicine," made before the National Association of Railway Surgeons, at Omaha, Neb., June 7, 1893. (Vide Med.-Legal Jour., Vol. I, p. 37. June, 1893. Ibid. Vol. XI, p. 203.) Chief Surgeon Granville P. Conn, M. D., of Concord, N. H., was its first chairman, and was succeeded by Chief Surgeon J. B. Murphy, M. D., of Chicago, Ill. The chief merit and usefulness of this organization lay in its uniting in its labors railway lawyers of eminence and distinction, and the leading chief surgeons of the prominent American railways, so that both sides of all questions could be studied, as well from the legal as from the surgical and medical side.

The record of the labors of this body can be best considered and appreciated by its annual reports. The first annual report of the year 1894 showed the history of the organization, and gave its officers and a list of members, embracing 28 of the leading chief surgeons of American railways, and a large number of local surgeons, military and naval surgeons and eminent railway counsel. It defined its province and domain by the following resolution: "Resolved, That all questions in medico-legal surgery are to be deemed within the province of the section, including military, naval and railway surgery and the broad domain of surgery in its relation to medical jurisprudence." (Vide full report, Med.-Legal Jour., Vol. XII, p. 471.)

The following extracts are made from its second annual report, January 2, 1896:

"The section is intended to embrace, besides naval, military and railway surgeons and counsel, railway managers, railway superintendents and claim adjusters—railway officials, whether lawyers or surgeons; many of whom have already united with the body, and who are

eligible to membership under the statutes of the society. The officers of the section are annually chosen. Three members of the Executive Committee constitute a quorum, and five of the board of officers of the section.

The work of the section during the preceding year has been devoted to the advancement of the science of the medical jurisprudence of surgery in all of its branches. The papers contributed upon these branches of science have been in part published in the Medico-Legal Journal, which is the official organ of the section, except those contributed to the Medico-Legal Congress of September, 1895, which will appear in the bulletin of that congress."

Its annual reports January 1, 1897, and January 1, 1898, published in the Medico-Legal Journal, show the great field of its usefulness and utility. (Vide March Nos. Medico-Legal Journal, Vols. XIV and XV.)

This section now embraces about 120 members, of which 23 are chief surgeons of railway systems, two surgeon generals of States, and the remainder local surgeons, railway counsel and railway officials, of which a list is contained in March number Medico-Legal Journal, 1898, with a detailed statement of its section work.

THE NATIONAL ASSOCIATION OF RAILWAY SURGEONS.

This is, so far as numbers go, the most powerful of the societies of railway surgeons.

It was founded in June, 1888, and its first president was Surgeon J. W. Jackson, M. D., selected at Chicago, Ill. The idea of its founders was to open its doors to every railway surgeon in the United States and the Canadas, and it soon grew into a very large body. At the meeting held at Galveston, Tex., in May, 1894, the enrolled membership exceeded 1700 names, and there were nearly one thousand persons in attendance at the session. Some there thought that the body was too large and unwieldy, and that that period was perhaps the maximum of its growth. It has not increased since then.

The scope of the work of this society is very broad, covering the entire field of railway surgery, and it aims to interest and associate every railway surgeon. It has held annual meetings in May of each year. It has made large contributions to the literature of railway surgery, and has published a journal which was for all the earlier years under the editorship of Professor R. Harvey Reed, then the treasurer of the organization.

Perhaps the most active and influential man in this body is and has been William B. Outten, M. D., Chief Surgeon of the Missouri Pacific Railway system, of St. Louis, Mo. He was president for one term, and on the retirement of R. Harvey Reed, M. D., became the editor of the journal, now called the Railway Surgeon, a position he still holds.

Its presidents have been as follows: Surgeon J. W. Jackson, Surgeon J. B. Murdock, M. D., of Pittsburg, Pa., was elected May, 1889, at St. Louis, Mo.; Chief Surgeon William B. Outten was elected May, 1890, at Kansas City; Dr. J. H. Murphy, of St. Paul, was elected May, 1891, at Buffalo; Chief Surgeon C. W. P. Brock, of Richmond, Va., was elected May, 1892, at Old Point Comfort; Chief Surgeon W. J. Galbraith, M. D., of the Union Pacific R. R. Co., was elected May, 1893, at Omaha, Neb.; Chief Surgeon Samuel S. Thorn, of Ohio, was elected May, 1894, at Galveston, Tex.; Chief Surgeon J. B. Murphy was elected May, 1895, at Chicago; Surgeon F. J. Lutz, M. D., was elected May, 1896, at St. Louis; Dr. George Ross, of Richmond, Va., was elected May, 1897, at Chicago.

The present officers are as follows: President, George Ross, Richmond, Va.; vice presidents, first, J. A. Hutchison, Montreal, Can.; second, A. L. Fulton, Kansas City, Mo.; third, De Saussure Ford, Augusta, Ga.; fourth, John J. Buchanan, Pittsburg, Pa.; fifth, H. L. Getz, Marshalltown, Ia.; sixth, R. R. Lawrence, Hartford, Mich.; seventh, W. Q. Marsh, Sierra Mojada, Coahuila, Mex.; treasurer, E. R. Lewis, Kansas City, Mo.; secretary, Louis J. Mitchell, 71 Laflin street, Chicago, Ill.; executive committee, W. B.

Outten, St. Louis, Mo.; J. B. Murphy, Chicago, Ill.; James H. Letcher, Henderson, Ky.

At its last meeting, in May, 1897, this body changed its name to "The International Association of Railway Surgeons," and it selected Toronto, in the Dominion of Canada, as the next place of meeting, in July, 1898.

THE AMERICAN ACADEMY OF RAILWAY SURGEONS.

This is an organization founded in 1894, composed of railway surgeons of eminence in the United States, and is an outgrowth of the National Association of Railway Surgeons. Its origin was due to differences of opinion existing among the original founders and prominent members of the elder society, both as to the basis of organization of the National Association of Railway Surgeons and its methods of work. Surgeon General R. Harvey Reed, M. D., now of Rock Springs, Wyo., was an important factor in the organization of the American Academy of Railway Surgeons, and one of the leading spirits. Since its organization he has been its editor.

This body has a membership (limited by its constitution to 200) of about 130 at the present time.

Its first president, elected in November, 1894, was Chief Surgeon C. K. Cole, of Helena, Mont., of the Montana Central Railway. Chief Surgeon John E. Owens, of the Chicago & Northwestern Railway Company, of Chicago, was its second president. L. E. Leman, M. D., of Denver, Colo., was its third president, and Professor R. Harvey Reed, M. D., now Surgeon General of Montana, is its president. It holds annual meetings.

Its present Board of Officers is: President, Dr. R. Harvey Reed, Rock Springs, Wyo.; first vice president, Dr. W. J. Mayo, Rochester, Minn.; second vice president, Dr. A. D. Bevan, Chicago, Ill.; secretary, Dr. D. C. Bryant, Omaha, Neb.; treasurer, Dr. C. B. Kibler, Corry, Pa.; editor, F. J. Hodges, Anderson, Ind.; Ch. Executive Board, F. K. Ainsworth, Los Angeles, Cal.; Ch. Committee on Transportation, Dr. W. J. Galbraith, Omaha, Neb.; Ch. Committee on Arrangements, Dr. Milton Jay, Chicago, Chicago, Ill.

Its next annual meeting will be held October 5, 6 and 7, 1898, at Chicago.

STATE AND OTHER ASSOCIATIONS OF RAILWAY SURGEONS.

In many of the American States State associations of railway surgeons have been organized, and several large trunk lines have organized associations of railway surgeons. These bodies meet annually, choose officers and discuss papers and are composed mainly of the local railway surgeons of the locality under the dominion of the association. Their chief value and importance is in the educational improvement of the railway surgeons of the United States by conference with each other, interchange of thought and experience, and they have resulted in very valuable contributions to the literature of the science.

The papers contributed by the members of the various State and local societies of railway surgery in the United States during each year in the recent past would fill several large volumes, and the mere enumeration of their titles and authors would be too extended for such a contribution as this.

If the National, State and other organizations thus contributing papers to the literature of medico-legal surgery would name an editorial revising commission with instructions to edit and publish all these papers for the benefit of both professions the volumes would be of very great interest and value.

The following are among the more prominent of these State organizations, as organized in the following States, namely: New York, Florida, Iowa, Indiana, Ohio, Texas and West Virginia.

Among the more prominent organizations of the large trunk lines may be named that of the Surgeons of the Big Four Railway System, Chicago & Northwestern Railway System, Wabash Railway System, The Pennsylvania Railway System, The Plant System, Santa Fee System, The St. Joseph System, The Southern Railway System and the North-

western Railway Surgeons' Association.

THE PROGRESS OF MEDICO-LEGAL SURGERY.

The methods of surgical practice since the last war in our country (1861), so far especially as it concerns military and naval surgery, have been marvelously changed.

In no branch of science has there been such stupendous changes and advances.

Surgery has become a more fixed and definite science in the past quarter of a century than in all the centuries before.

There has been a complete revolution in methods and in treatment by the military, naval and railway surgeon.

In 1861 a gunshot penetrating wound of the abdomen severing the intestines was regarded as almost certain to be fatal.

To-day the surgeon who lost such a case would be compelled to make an explanation or might be mulcted in damages in an action for malpractice if he did not do so satisfactorily.

The whole field of antiseptic surgery has been changed.

ELECTRICITY.

Electricity has come to be the hand-maiden of the surgeon, and sheds light upon the darkest and most impenetrable problems that surround his path. The Roentgen ray has no use anywhere at all comparable to its magnificent contributions to medico-legal surgery.

The magic lantern, in the whole domain of electric therapeutical surgery to-day, illumines the hand and the path of the surgeon, and the splendor of its achievements in abdominal surgery alone are resplendent and read like the tales of the lamp of Aladdin.

With a view of obtaining the views of the most eminent surgeons upon the evolution of modern medico-legal surgery I addressed the following letter to Surgeon General Nichols Senn and Surgeon J. N. Hall, two of the most eminent American authorities, the one on military surgery and the other on gunshot wounds, and its other eminent surgeons.

Medico-Legal Journal, Office of the Secretary.

New York, May 16, 1898.

Dear Colleague:—I am announced to write shortly on the "Progress of Medico-Legal Surgery," and I wish to touch on the more important changes that have occurred in military surgery since the period of our Civil war, in 1861. More especially in gunshot wounds of the abdomen and the whole field of antiseptic surgery.

Will you please name four or five of the most important advances in modern military surgery in this intervening period?

The war on which we are now entering will make such an inquiry all the more interesting now, and your large experience will be of value.

I shall, of course, credit you with anything you furnish me.

Believe me, dear sir, very faithfully yours, CLARK BELL.

Surgeon General Senn replies as follows:

Camp Tanner, Ill., May 20, 1898.

Mr. Clark Bell, 39 Broadway, New York.

Dear Mr. Bell:—The most notable improvements in military surgery since the war of the Rebellion consist of protecting the wounded by strict antiseptic precautions. The wounds made by the small calibre bullet will present features which will require extensive observations to determine whether they are more mortal than those inflicted by the large bullet. One of the important features in the war which faces us will be the prompt treatment by operative measures of abdominal wounds, which I am sure will be the means of saving many a valuable life. My future headquarters will be the Sixth Army Corps, Camp Thomas, Chickamauga, Ga.

Very truly yours,

N. SENN,

Lieutenant Colonel, U. S. V.

Surgeon J. N. Hall replied as follows:

Denver, Colo., May 20, 1898.

Hon. Clark Bell, 39 Broadway, New York City.

Dear Sir:—The most important improvements in military surgery have been, I think, as follows:

The introduction of asepsis and antisepsis and consequent disappearance of the scourge of hospital gangrene, and, owing to healing by first intention, shortening of the time in hospital, and consequent increased efficiency of the surgical department.

Secondly, the wider application of resection of joints and saving of useful limbs in place of amputation. An improvement in this connection is the use of plaster of paris and similar dressings.

Thirdly, the introduction of stitching or uniting by means of the Murphy button, or otherwise, of wounds of the intestines.

Fourthly, improved means for checking hemorrhage in parenchymatous organs; as, for example, the liver, kidneys and spleen, and in allowing a freer access to them because of the improved methods of operation and consequent improvement as to the mortality rolls after such wounds.

Yours very truly,
J. N. HALL, M. D.

Dr. J. Mount Bleyer is one of the most experienced of the junior American surgeons in electro-therapeutical surgery, and his experiments with the Roentgen ray are the best I have seen produced.

I addressed him a similar inquiry as to the advance in modern surgery by the use and application of electricity since the war of the Rebellion of 1861.

His reply is as follows:

460 Lexington ave., New York, May 23, 1898.

Clark Bell, Esq.

My Dear Sir:—You ask me to give to you the progress of the surgery of electro-therapeutics since the period of the war of the Rebellion.

I should state them briefly as follows:

1. The electro cautery, which renders many operations bloodless.

2. The destruction of tumors by electrolysis, which is a complete atrophy of the tumor, cutting off the blood supply completely and successfully.

3. Electric illuminations by which the bladder, stomach, throat, ear, nose, and, in fact, all the cavities of the body can be successfully examined and explored.

4. The X-ray, which still in its infancy is one of the most marvelous aids to surgery.

5. Electro diagnosis.

6. The treatment of certain forms of disease by various electrical contrivances as electro-chemically disintegrating diseased tissues.

7. Electro-motor powers with most marvelous results.

8. The useful effects of high tension currents.

9. The accurate doseage of electricity by means of delicate apparatus.

Yours very truly,
J. MOUNT BLEYER.

Chief Surgeon Granville P. Conn, of Concord, N. H., was the first chairman of the section on medico-legal surgery of the Medico-Legal Society, and an authority of eminence and distinction. His reply to a similar letter as to the evolution of railway surgery during the same period was as follows:

Concord, N. H., May 30, 1898.

Hon. Clark Bell, Editor Medico-Legal Journal, 39 Broadway, New York, N. Y.

Dear Sir:—Yours of May 26 is at hand, asking for the most notable advances in the department of surgery, especially in railway surgery.

In the first place, the department of railway surgery has been actually entirely evolved as department of general surgery since the war of the Rebellion. Second, the introduction of antiseptics in surgery, and the possibility of performing aseptic operations, has entirely come to the front since the close of the war of the Rebellion. Since the introduction of antiseptics, and the possibility of aseptic surgery, operators have been enabled to perform, with perfect impunity, an operation that was not considered feasible prior to 1861.

The opening of cavities, the resection of bones and internal anatomosis become matters of almost every-day experience, and these were looked upon with especial disfavor in anti-bellum times. It is but natural to ask how much has been accomplished in so short a period. The answer is plain, but significant, in the fact that it has all been brought

about and made plain by hygiene, which takes cognizance of everything connected with medicine and surgery. It has pointed out that cleanliness and the destruction of disease germs prior to operations will insure almost perfect results when proper hygienic measures have been introduced, and their principles thoroughly carried out.

Very truly yours,
G. P. CONN.

ARGYROSIS OF THE CONJUNCTIVA THE RESULT OF PROTARGOL.

BY R. DENIG, M. D.,
New York.

At a meeting of the German Polyclinic, May 20, 1898, I spoke in reference to my experience with protargol.

The authority of Neisser, who recommended it for the treatment of gonorrhea, and the publication of Darier, Paris, who first made use of it in affections of the eye, induced me to ascertain its effects in about fifty cases, which came under my observation during my service in the dispensary and in private practice.

Cases of different character presented themselves, e. g., acute and simple catarrhal conjunctivitis, decryocystitis, blenorrhea neonatorum, etc.

I stated at that meeting that the protargol would hardly take the place of nitrate of silver, although in some cases it seemed to produce good effects. I also stated that the instillation of protargol in a 5 per cent. solution was not painless; it did not give the acute pain which nitrate of silver produces, but in nearly all cases the patients complained of great discomfort. Anxious to ascertain its effects I instilled a few drops into my own eye and experienced the same discomfort, not only for a short time, but for several hours.

Since that meeting I had the opportunity to observe the formation of argyrosis, produced by a prolonged instillation of a 5 per cent. solution of protargol.

The 3d of April Mr. M. consulted me in the dispensary on account of a subacute conjunctivitis. I prescribed a 5 per cent. solution of protargol, to be applied one drop in the morning and one in the evening. I told the patient to call again three or four days later. He, however, did not call until four months afterward. I found the fornices of the conjunctiva showing the typical argyrosis, such as is occasionally seen in the chronic tractoma cases of Russians and Hungarians, who get their prescription of nitrate of silver from their physician and mistreat themselves.

The patient told me that he did better with the first few applications, and that later on he was continuing to use them.

Darier (Ophthalmol Klinik, No. 5, p. 93) recommended the protargol on account of its ability to penetrate into the depth of the tissue. This ability seems to be indeed a marked one, considering the shortness of the time it took in our case to develop an argyrosis. As the protargol contains 8.3 per cent silver and does not produce any coagulation of the tissues, furthermore as the Null of the organic substances makes no deposit, the protargol impregnates and penetrates the epithelial cells, working its way into the depth of the tissues. In this way the danger of argyrosis from the use of protargol is greater than is the case from the use of silver nitrate.

OVER THE C. & O. TO THE HOT SPRINGS VALLEY.

BY JOSEPH R. CLAUSEN, A. M.,
M. D.

For beauty of scenery its entire length few if any railroad routes in this country can equal that of the Chesapeake & Ohio Railroad. From mountain to sea it is a continuous panorama of beautiful vistas, in which mountain, stream, meadow and woodland combine to form the most charming of natural effects. This is notably the case after leaving Washington on the way South. Within a few hours the traveler finds himself surrounded by the verdure-clad mountains of Virginia, and at every bend of the road some new and grandly beautiful scene is spread out before his enraptured gaze.

Why will people travel so far from home to view scenes that can scarcely equal these so near at hand? is the question one invariably asks himself as hour after hour adds new delights in the way of scenic beauty. We question much if anywhere you will find more beautiful views than some that make the run along the picturesque Greenbrier so delightful. Take for instance the view east of Alderson, that at Wolf Creek, that at Riffe's Crossing, that east of Whitcomb and many others scarcely second in beauty. Then the series of vistas on the beautiful New River, among which we may mention that at Meadow Creek, that at Nuttall, the canon at Blue Hole Tunnel, the great Horseshoe at River Canon and those equally charming views at Caperton and Elmo. No less entrancing are the views along the James River, notably that at Gala Water, at Eagle Mountain Station and at the Wasp Rock Tunnel. These, to say nothing of the panorama west and east from Hawk's Nest, the view down the valley at Jerry's Run and the ever beautiful Kanawha Falls, combine to make the Chesapeake & Ohio one never to be forgotten.

But to the physician it is the Hot Springs Valley of Virginia, on the line of this road, that makes the very mention of its name a suggestion of life and health.

This valley, which is cradled among mountains whose pine-crested summits are hidden in the clouds, is itself 2200 feet above sea level. An ideal land, where the extremes of winter and summer are alike unfelt, where the climate is always dry, the temperature always uniform, the air always pure and the scenery always inspiring, conditions that in themselves insure relief for the sufferer and bid the broken down in health to hope anew. But they are not all. In fact, they are but secondary to the great, the God-given feature of this beautiful valley—its healing waters. Fresh from nature's caldron they flow out, bearing health and happiness to the nations, for their fame has traveled to other lands than our own, and from every quarter of the globe to this greatest of nature's sanitariums. In this valley is situated the celebrated Virginia Hot Springs, well called the Homburg of America; two and a half miles further up the valley the great Healing Springs, the Carlsbad of America, where the waters, fresh from the mountain recesses, are bottled for consumption the world over.

At both places art has vied with nature to make of them a veritable paradise. Beautiful hotels that boast of every modern convenience are supplemented by cottages equally beautiful, magnificent grounds, provided with golf links, tennis courts and every other means for the enjoyment of out-of-door sports stretch away in broad expanse on every side. A perfect livery system and well-built roads bring all outlying points of interest within easy reach, while indoors every provision is made for the comfort and entertainment of guests.

At the former place the Homestead, one of the most magnificent hotels on this continent, has recently

been enlarged by the addition of over 200 rooms, and under the efficient management of Mr. Frederick Sterry is an ideal stopping place.

The hotel at Healing Springs, while less palatial, is both commodious and beautiful, its broad verandas, roomy sleeping apartments and charmingly Southern living rooms giving it an attraction all its own. Under the able management of Mr. A. M. Stimson, assisted by that most estimable of ladies, his mother, it is a place that one is very loath to quit.

Here, as at Hot Springs, is a magnificent bath house, provided with every appliance for enjoying to the full the benefits of the waters.

Little need be said of the service provided by the railroad itself. The one word "perfect" describes it. A well-ballasted roadbed, the most improved rolling stock, and an evident consideration for the comfort and convenience of its patrons that shows itself in a thousand different ways, make its solid, vestibuled, electric-lighted trains little short of homes on wheels.

Does the condition of your health demand such environments as we have described? Does that of any of your patients? Are you or they looking for a delightful spot at which to take a needed rest? If so let your destination, their destination, be the Hot Springs Valley of Virginia.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN ORTHOPEDIC SURGERY.

Meeting of March 18, 1898.

CONGENITAL DISLOCATION OF THE HIP.

Dr. R. Whitman presented a little girl 2½ years of age, on whom he had operated for congenital dislocation of the left hip when she was 18 months old. The method followed had been the bloodless operation of Lorenz and the plaster of paris bandage had been finally removed last November. In the absence of any trace of deformity or disability it was impossible to detect any difference between the two sides, and the cure was evidently perfect. He thought it was the first cure attained by this method in New York.

Dr. T. H. Myers reported that he had seen last week the girl on whom he had operated at the age of 3 1-2 years in January, 1895, by the method of Paci. The joint was firm with no telescoping. There was no limp, and the child runs, jumps and hops with perfect freedom. He thought it was the first successful application in this city of Paci's method.

Dr. A. M. Phelps said that in the patient exhibited there was a perfect reduction, but it was probably a case of dislocation at birth in a child in whom the acetabulum was normal. He did not believe that the bloodless, forcible reduction was a good method. After a child had passed the second year the head was developed, the acetabulum was undeveloped and the capsular ligament was drawn out and constricted like an hour glass, making a reduction mechanically impossible. There was no reduction, simply the conversion of a posterior into an anterior dislocation. The only way was to make an acetabulum and put the head of the bone into it.

Dr. G. R. Elliott said that the acetabulum in these cases was fairly developed in children up to 4 years of age. The head was felt as it was forced over the border of the socket, it was felt to be retained and it could be easily dislocated again. If it was retained by fixing the limb at a proper degree of abduction it could not get out of its position, being held by the ligaments and muscular structures, and the probability of its leading to a more perfect acetabular development was greater than after an operation in which the ligaments and muscles had been cut.

Dr. Whitman said that the head of the bone was capable of making an acetabulum, and that a rudiamentary acetabulum existed in nearly all cases, as was proved by the observation that when the head of the femur was pushed in place it stayed there. When the dislocation was anterior, which was not usually the case, the bone should be twisted around.

COXA VARA.

Dr. Whitman also presented a boy 11 years of age, who had the waddling gait and lordosis of congenital dislocation of the hip. It was, however, a case of double coxa vara with prominent and elevated trochanters. There was free flexion and extension, but limited abduction. There was no pain or discomfort. Both femoral necks were depressed beyond a right angle with the shaft, but not bent backward, consequently there was no eversion of the limb; otherwise the signs were typical. The trouble began when the boy was

4 years old, and had its origin in rickets. He has been treated for hip disease at intervals for six years. Dr. Whitman had seen several cases in children, one of whom was but 2 1-2 years of age. The affection is therefore not limited to adolescence.

DEFORMITY OF THE TIBIA-OSTEOTOMY.

Dr. B. F. Curtis presented a patient on whom he had operated for anterior bowing of the tibia. The patient, a girl 12 years of age, had been presented and the case discussed at the meeting of November 19, 1897 (See the "Medical Times and Register" January 15, 1898, pp. 8, 9. —Ed.) At that time the tibia was three inches longer than that of the sound leg, and the circumference of the leg was one and one-half inches more than that of the other. The general health had been poor, probably the result of pain. A skiagram showed thickening, with some irregularities, in the enlargement and almost complete disappearance of the epiphyseal line due to pressure. The diagnosis had been undetermined. Sarcoma, syphilitic osteitis, necrosis with a sequestrum and abscess of the medullary cavity had been suggested and considered. After rest in bed for a month and the administration of iodide of potassium, the tenderness had disappeared and the general health was much improved, and it became more evident that the local affection was of syphilitic origin. On January 6 the fibula was fractured and the tibia straightened and shortened by the removal of a wedge measuring over an inch posteriorly and two inches on its anterior surface. The bone was found to be roughened on the surface and the central canal had disappeared. The bone was hard, but not so hard as cortical bone in the adult. It was of the same consistency all the way through, and was pronounced by a pathologist to be normal in structure. The subcutaneous, soft parts were so voluminous that the skin was with difficulty made to cover the wound. Later two long incisions were made on either side of the wound and the skin was dissected up and drawn over the bone. Thiersch grafting was done on February 22. The result was a fairly good leg. The bone was of normal length and there was no tenderness. Ability to walk well had not been acquired, as the patient had been out of bed only a week.

Dr. T. H. Manley said that the gross appearances were those of a malignancy limited to the hard tissues, but with an obvious tendency to infiltrate into and involve the soft parts. The osteoplastic procedure had gained all that could be desired in reducing the length of the limb, but he believed that further trouble was sure to follow, and would be interested in the progress of the case.

Dr. Phelps believed that the condition was due to congenital syphilis.

MULTIPLE OSSEOUS TUBERCULOSIS.

Dr. V. P. Gibney presented a boy whose previous history was rather obscure. Early in 1897 the left limb had been amputated for "consumption" of the knee. He had been under treatment since last May. There was a focus in the shaft of the left humerus which had been operated on several times, and also one on the right elbow. In the latter had been found streptococci, staphylococci and micro-organisms resembling diphtheria bacilli, but no tubercle bacilli. Recently there had been beginning anchylosis of the jaw. A previous diagnosis of multiple sarcoma had been made, but it was more than probable that the foci encroaching on the joints were tuberculous.

RADIOGRAPH SHOWING AN OSTEITIC AREA.

Dr. Myers exhibited a radiograph which showed an area of diminished density within the head of the radius and increased density about it. A sclerosing osteitis probably surrounded the site of a caseous focus which had been curetted. After many trials this was the first success he had made in locating a diseased area by the X-ray.

POTT'S DISEASE TREATED BY FORCIBLE REDUCTION OF THE DEFORMITY.

Dr. Gibney showed a boy 12 years of age who had Pott's disease as long as he could remember. There had

been no previous treatment. The kyphos had been very marked. On March 1, 1898, a moderate degree of force under an anesthetic had reduced the kyphos a great deal, the parts yielding easily, and a plaster of paris corset was applied in the prone position, from the pelvis to the axillae. He was kept in bed for three days, much against his wishes, and since then has been playing about the wards. There was absolutely no reaction. Another boy, 6 years of age, was presented, wearing a plaster of paris corset after forcible reduction of a well-marked kyphosis. Previous treatment had been by apparatus, jackets, etc. The disease, in the dorsal region, had been long since arrested. The projection had been considerably diminished by an amount of force not greater than in the first case. During the operation his respiration became rather labored, and the anesthesia was discontinued. The only reaction was a slight slowing of the pulse after the operation and on one day since. These patients were presented to show that deformities can be materially reduced by this method without reaction or any immediate bad results. In after treatment it was not necessary to fix the head and shoulders. If the plaster is brought well up there would be no recurrence. The English surgeons were advocates of the steel apparatus. They criticise the French, who put their patients up in cotton, covered with plaster of Paris. There were plaster jackets and plaster jackets. If too much cotton were used a good fit would be impossible, the parts would recede and the jacket would become loose. If the plaster was properly applied it would give no trouble. The fear that forcible correction would induce tubercular action in the meninges or elsewhere was not well founded. In an experience of years in the forcible correction of deformities of the hip it had been the rarest thing in the world to get any dissemination of the bacilli.

Dr. Phelps presented a girl 7 years of age, wearing a plaster of paris jacket after forcible reduction under ether of an extremely large kyphos. The disease had been of four and one-half years' duration,and was between the sixth and ninth dorsal vertebrae. A jacket had been worn for four years. The operation seemed very cruel, and had been undertaken with fear and trembling, only partially dissipated by the favorable reports of French operators. The kyphos had been nearly all reduced after so much snapping and cracking that it was thought the child's back was broken. There was no reaction and the patient was up and about in less than four days. The procedure was applicable to the early stages of the disease. In the presence of a large kyphos or anchylosis or abscess it was a dangerous method.

Dr. W. R. Townsend related a case in which an inconsiderate resort to this operation would have been disastrous. A girl 31-2 years of age was under treatment upon an open frame for disease in the upper dorsal region. There was a cough and impeded respiration and other symptoms of bronchitis, followed rather suddenly by asphyxia and death. Autopsy showed a retro-pharyngeal abscess in the median line, directly over the vertebral column, and extending to the right. There was no pressure on the trachea, which was normal in size and not flattened. Numerous enlarged glands had pressed on the recurrent laryngeal nerve and caused paralysis of the vocal cords. The second dorsal vertebra was so much diseased that the finger was pushed right through to the spinous process. Forcible reduction would have ruptured the abscess or done some damage to the bone. The dangers of the operation were readily realized. The procedure might give good results in suitable cases, but it should be well tried before being widely recommended.

Dr. Myers had not as yet heard of any cure as the result of this procedure. The cases should be very carefully selected and care taken to ascertain that no abscess was present. The operation was dangerous and results should be waited for before the method should be commended at all. The protection given to

the spine after the operation should be most perfect.

Dr. H. L. Taylor could not think well of this method without the light of further experience. The tendency had been to make the procedure much less radical than it had been at first, when reduction of the deformity sometimes called into action all the strength of the operator, with perhaps resection of the projecting spinous processes, and in suitable cases excision of wedges of bone. In some instances the spinous processes were wired together after reduction, and it was considered important to encase the head and the pelvis in the plaster of paris jacket. With the obvious tendency toward simplification of the treatment it remained to be seen how much of the original operation would remain after the method had been well tried. It was safe, thus far, in the hands of experts, but it would be dangerous to encourage the general practice of the method.

Dr. R. H. Sayre said that if the diagnosis were made before the kyphos appeared there would be no necessity for this operation. He thought that if it could be determined in advance which cases could be straightened without damage this operation could be readily accepted. In some cases there were no vertebral bodies left, and the column was held together by the spinous and transverse processes. In other cases the bone was so diseased that forcibly straightening the spine would produce gaps between the vertebrae leading to the production of abscesses. It was extremely doubtful whether this method should be employed. In any event, the cases should be most carefully selected and there should be no elevation of temperature and no morbid action present.

Dr. Manley thought that the forcible correction of this deformity in appropriate cases was justifiable, to be followed by some form of thoracic support after correction.

Dr. Elliott said that two cases of forcible correction followed by death had been recently reported in the British Medical Journal.

Dr. A. B. Judson had seen no reason for not being satisfied with treatment by the use of the steel brace. Patients with Pott's disease suffered so much inevitable daily traumatism in standing and walking that the injury accompanying the method under discussion would not seem to be necessarily fatal or even dangerous. The question was whether it was wise to add to the unavoidable and habitual traumatism. If we could restore the curves and strength and mobility of the spine almost any treatment would be accepted. But it could not be hoped to carry recovery to that desirable point. Moreover, it was very doubtful whether consolidation would come to our aid at the opportune moment to secure the improvement in shape made by the forcible reduction.

Dr. Phelps had looked up the literature of the subject. On the one hand it had been stated and demonstrated by radiographs that bone had been reproduced in cases in which there was wide separation after reduction, and one operator had reported 204 cases, with no deaths and no accidents. On the other hand, other operators had reported many relapses, sometimes with paralysis; a number of deaths had been reported, the kyphos had been reducted in a cadaver with rupture of an abscess and in another subject with fracture of a vertebra. Some investigators are enthusiastic in favor and others condemn it in round terms. Although there was probably a field for operation it was necessary to proceed slowly.

Dr. Gibney said Dr. Townsend's patient was an exceptional one. Most patients seen offer no contra-indication to the operation. He had not found that patients with a deformity of the spine were cheerful at the prospect of going through life with it. They were morose and felt that nature had treated them harshly, and it was necessary to do something for them. If he had a child with such a deformity he would welcome almost anything which promised relief. He understood the dangers of the operation, and was opposed to its wholesale performance. While fully appreciating the importance of

what had been said he thought that clinical facts were al o entitled to weight. He believed that deformities could be materially reduced by the method, but that it should be done gradually at several sittings, rather than all at once.

LATERAL CURVATURE TREATED BY FORCIBLE REDUCTION.

Dr. Gibney also presented a patient, a girl 14 years of age, affected with lateral curvature of the spine, whose parents had urged that something be done to correct the deformity, being willing even to have a section done. Under an anesthetic a twisting motion was employed for some five or ten minutes, and the patient was then put into plaster of paris. She was treated three times. There had been no reaction. She had gained one and three-quarters inches in height, and the back was in a much better position than it had been before.

AN UNUSUAL CASE OF POTT'S DISEASE.

Dr. Townsend presented a patient in whom the deformity had not been attended by symptoms. The patient was a girl 11 years of age. Two weeks ago the mother, when giving the child a bath, had for the first time noticed a projection, which on examination was found to be at the tenth and eleventh dorsal vertebrae and so sharp that the case did not seem to be a favorable one for forcible reduction. The child was in good health, and had had no pain or any other symptom, and no history of illness. She was extremely active and could stand any amount of jarring. Excepting near the kyphos the spine was very flexible. There was also at the site of the projection a slight deviation to the right, but no sign of rotation.

Dr. Gibney recalled the case of a patient who, without pain and with no history of symptoms, presented a similar deformity of apparently rachitic origin. He had intended to apply forcible reduction.

CERVICAL ABSCESS COMPLICATING POTT'S DISEASE.

Dr. Myers presented a boy 7 years of age with Pott's disease of the third and fourth dorsal vertebrae, complicated with an abscess discharging in the neck behind the right sterno-cleido-mastoid muscle. The treatment had illustrated the effect of the supine position in securing good drainage. The spine had been protected by a brace, but the discharge was profuse, and the temperature varied between 100 degrees and 103 degrees. When he was placed supine in bed without a pillow in two weeks the temperature dropped two degrees. He was then allowed to leave his bed and the temperature soon rose to the former level. He was then returned to bed and the temperature subsided as before. The discharge gradually decreased, and when it had nearly ceased he was allowed to be up. His general health was entirely restored and there had been no discharge for several months.

Dr. Townsend presented a girl 3 years of age, with Pott's disease of the upper cervical vertebrae. There was an abscess the size of a hen's egg extending around the outer side of the sterno-cleido-mastoid, about half being deep-seated, the remainder superficial. Two-thirds of the abscess was posterior to the muscle and over the swelling were a number of enlarged veins. The patient had been put on a frame and the abscess would be opened without undue delay by an incision back of the muscle.

Dr. Phelps urged the importance in similar cases of early operation to prevent rupture into the pharynx and the occurrence of tuberculosis from the flowing of the infective material into the larynx during sleep.

MALIGNANT DISEASE OF THE SPINE.

Dr. Taylor presented a man 47 years of age, in poor general condition and giving a history of very severe pain in the lower part of the back for eight months. In that time he had lost much flesh and had been disabled by limitation of motion in the lumbar region of the spine and difficulty in locomotion and other movements of the body. The upper part of the back was rounded and the spine of the first lumbar vertebra was prominent and deviated to

the left. There was a well-defined area of sweating in the right loin, probably from invasion of a sympathetic ganglion and vaso-motor paresis. This symptom was not present in tubercular disease of the spine, but he had observed it before in cases of malignant spinal disease. Partial relief would probably follow the application of a jacket, and morphine would be given to control the pain.

Dr. Sayre suggested the use of the actual cautery to temporarily relieve the pain.

APPARATUS FOR FORCIBLE EXTENSION.

Dr. Elliott exhibited an instrument which he had devised for forcible extension, especially for the reduction of the congenitally dislocated hip. It was light and inexpensive, and consisted of a small rectangular frame about six inches wide and 15 inches long. In the centre of the long axis was an extension screw. To a crossbar on this extension screw was attached preferably the ends of a skein of yarn, which had previously been adjusted to the ankle of the patient. The frame could be affixed to any table or bed and the force employed, the patient being firmly held by an assistant; could be regulated at will and, if desired, measured in pounds. The instrument, besides being used for reduction of dislocation of the hip, as described, could also be conveniently used in the forcible reduction of the spinal column in cases of angular curvature, the proper adjustments being easily made.

MEETING OF APRIL 22, 1898.

THE TREATMENT OF RACHITIC DEFORMITIES.

Dr. R. H. Sayre read a paper with this title, of which the following is an abstract:

Patients affected with well-marked rachitic deformities would not "outgrow" them. Treatment should be active and should vary with the pathological stages of the affection. In acute rickets cod liver oil would be of great benefit, and phosphorus in the Elixir of the National Formulary would yield good results, given three times a day in doses as large as the fiftieth of a grain. When the bones were soft they should be subjected to manipulation, and the child should be kept in the recumbent position, which is best done, if there are spinal deviations which require special attention, by the use of the wire cuirass. The two great aids of fresh air and sunshine would thus be invoked and would be not less effective than treatment by the use of drugs. Instruments should be applied in order to retain the improved position secured by manipulation. In decided knock-knee or bow-legs, if the bones are not too hard, the deformity might be corrected by the plaster of paris bandage changed in shape and in the degree of its pressure from time to time by cutting out a section of the plaster at the point of greatest deviation, inserting a wedge in the cut and applying additional plaster to retain what is gained. In similar cases of coxa vara depending on a rachitic process in adolescence the deformity could be overcome by traction in the recumbent position. When eburnation was established efforts to correct deformity by manipulation or by instruments would be a waste of time, and the osteoclast or the chisel should be used, the latter when the division was to be made near a joint and the former when the force was to be applied at a point an inch or more removed from a joint. In some extremely rachitic subjects non-union followed an operation from delayed formation of new bone cells due to eburnation and impaired nutrition. A not uncommon manifestation of rickets was seen in pigeon toes, the result of an instinctive turning in of the toes to avoid receiving the weight of the body directly on the weakened tissues of the foot. Injudicious efforts to induce the toes to turn out might lead to flat-foot and increase the usually present tendency to knock-knee.

Dr. S. Ketch had used phosphorus in the treatment of rickets for 20 years with excellent results. He preferred a compound syrup of the hypophosphites containing lime, iron, potash and soda without strych-

nine. Manual force was of benefit in nearly all cases, especially when the patients were off their feet. When they began to walk gratifying results would follow the employment of the usual bow-leg and knock-knee apparatus. Unless there were exceptional reasons for protecting the spine he would not use any restraining apparatus like the cuirass for recumbent patients. Time should not be wasted in waiting for the patient to "grow out" of the deformity.

Dr. A. M. Phelps said that at the beginning of the treatment the patient should be taken off his feet, and if the bones were not hard we should bend the bones, producing perhaps a green-stick fracture, and thus straighten them by manual force. Bones that had become sclerotic required osteoclasis or osteotomy. The latter should never be done in children under 12 years of age unless demanded by some unusual condition, and in all cases osteoclasis should, as a rule, be preferred to osteotomy. Non-union was found only after osteotomy, and it was attended with some danger! deaths have been reported, whereas these accidents never occurred from osteoclasis.

Dr. Ketch opposed operative procedure in the early stage. The experience of the past and of the present day showed that manual force and mechanical treatment were sufficient to effect a cure. A speedy rectification of the deformity by an operation was misleading, because the time required by the mechanical treatment after the operation was as long as it would have been if no operation had been done. In no way, except mechanically, could the child be protected against a return of the deformity.

Dr. A. B. Judson said that in orthopedic practice operations should as a rule be avoided. The patients were children, and the question of time was unimportant. If pressure were applied in the direction opposite to the deformity and due time and attention were given, the natural growth was a curative agent. If treatment were begun early and the patients were taken off their feet, the deformities of rickets especially were curable by mechanical methods alon

Dr. R. Whitman said that the slight deformities of children should receive more attention than was customary. He had observed that pigeon-toes were as a rule symptomatic of rachitic knock-knee or flat-foot, and represented an effort of nature to restrain deformity. Many cases of coxa vara had their origin in infantile rickets. The deformity of the femoral neck was latent in childhood. During adolescence the neck, being from its depression subjected to greater strain, gave way and deformity and disability followed. In the same way adolescent knock-knee was in many instances an exaggeration of a slight deformity in infancy. In extreme cases of coxa vara he thought that restoration of abduction by division of the neck of the femur was generally required, and that in any kind of a case simple extension would not often be effective.

Dr. C. N. Dowd said that after osteotomy above the femoral condyles he had found that the corrected position could be perfectly maintained by carrying the plaster of paris to the upper part of the thigh instead of inclosing the thorax. A towel was put between the knees and the feet were tied together. Cleanliness was thus promoted and the children sat up in bed, ate in comfort from a tray and could play with toys without interfering with treatment during the period when the bone was uniting.

Dr. Whitman preferred the double spica of plaster of Paris, which insured absolute fixation and in the routine of hospital treatment had not entailed undue inconvenience or unpleasant consequences.

Dr. Sayre said that an early diagnosis followed at once by active treatment when the tissues were soft and ready to yield to moderate pressure would prevent a great deal of trouble at a later stage, when eburnation would require that the deformity be reduced by forcible procedures. He thought that a child could not be kept in bed very well without some little apparatus. If the cuirass was objectionable put on a pinafore

and fasten it here and there to the bed, and thus bring the child to anchor. In serious cases the cuirass or Bradford's frame were a great convenience. Children in them are like little wooden images, and they live in them for two or three years, are happy and comfortable and have their toilet made without any great bother to the nurses. Apparatus was very useful to hold the bones in position after they had been brought to a straight position, but to bring them to a straight position apparatus was not nearly so efficient as putting them up in plaster of paris. It was simply a question of leverage, and he had found that leverage was more accurately applied by the use of plaster of paris than by any other means.

A SPECIMEN OF CONGENITALLY DISLOCATED HIP.

Dr. G. R. Elliott exhibited a specimen which was removed from a child 7 years of age. It showed congenital dislocation of the right hip. During life there was one inch of shortening of the right lower extremity with eversion. Post mortem findings: Gluteal group of muscles somewhat shortened. Pyriformis muscle one-half inch shorter than its fellow, and reduced to a tendinous band. Adductor group of muscles somewhat atrophied. The neck of the femur of the affected side was very short, the upper part of the bone consisting chiefly of head and great trochanter. Displacement upward and forward. Capsule thickened, shortened and intact. Head of bone fairly normal and synovial surface in good condition. Ligamentum teres lengthened, but size apparently normal. Acetabulum to be examined and reported upon later.

Editorial

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THE VALUE OF THE WAR TO THE UNITED STATES.

If there has been anything demonstrated during the progress of the Spanish-American war which has warranted our Congress for plunging us into a belligerent attitude it is the effect which the unsanitary condition of Cuba has had upon our troops at the front.

The vast amount of yellow, typhoid and malarial cases among the soldiers of the army and the practical lack of such cases among the boys of the navy points out the value of good sanitation, especially in hot climates. These diseases for the greater part are filth disorders, and as such are removable with their causes, and Cuba seems to have been the hotbed for their incubation.

It should be the duty of our Government, as fast as practicable, to thoroughly drain and cleanse our new acquisitions of territory, from which comes so much pestilence and disease into the ports of our Southern coasts. It ought not to be a hard task for our engineering corps to provide ample means for accomplishing this end. True, it will take years and an immense amount of money to put Cuba into a sanitary condition, but this should be no barrier when the lives of generations of our children's children are to be affected thereby.

If we are to ever turn over an independent government to the inhabitants of this benighted island and give them the sole right to make a free republic out of it, let us first scour it out, scrub and polish it, and then feel that, having set the example of cleanliness, being next to Godliness, we shall expect no more disease of a filthy nature emanating from its shores.

LESSONS OF THE LATE CAMPAIGN.

Not long since we declared that our army had performed wonders in the late Hispano-American campaign, for we can hardly designate it a war with all which that term in modern times implies, because no general engagement was fought in which artillery and cavalry were employed, and there were no bayonet charges at close quarters.

We noted, also, that our Government had abundantly provided the army with medical skill and commissary supplies, and further, in spite of the wholesale, vile denunciation of the Government by the medical and lay press of the country we rigidly adhere, in its whole entirety, to that statement.

The nation clamored for war "to avenge the Maine;" but the President, an old soldier himself, used all his powers to avert it and prevent bloodshed. The Surgeon General of the army, a most conscientious and conservative man, repeatedly warned us of the terrible dangers attending an invasion of Cuba in the summer months. Our raw levies were put on the move. Dewey and Sampson had destroyed the Spanish navy, but there were 200,000 Spanish soldiers yet in Cuba, to which we opposed 25,000, for no one will pretend that a month old recruit is a soldier.

Our Spartan band reached Santiago, when it was found that there were no docks to land the army, nor any lighters to transport the troops. But in some way or another they landed. General Shafter, ably seconded by the intrepid veteran, General Wheeler, moved on the enemy with an impetuous rush and with 21,000 men forced a surrender and brought the war to a close with a loss of less than 300 men.

But, alas! the worst was yet to come; the terrible depressing heat of this summer everywhere fell with fearful force on our troops in the South and in Cuba, and with it came the dreaded yellow fever, pernicious malaria, typhoid, dysentery and other torrid and tropical diseases.

Great God! What would have been the consequences had Shafter waited for supplies, undertook to build docks and roads, had tarried until the Spanish commander had been reinforced at Santiago, till the wilting heat and yellow fever had seized on his army?

The answer to this question is too terrible to contemplate. National honor would have compelled a second call for troops; the enemy, discerning our weakness and susceptibilities would have drawn our legions far into their fever-laden marshes and left their rapid destruction to the elements.

We have a lively recollection of the return of Sherman's and Sheridan's armies, not after a few weeks' sojourn, but from the three to five years, from the valleys of the Cumberland, the James and the Potomac, after the Civil War, but they came to us seasoned, swarthy veterans, very many in much better physique than when they left. But what a contrast with our troops returning now, wasted, cadaverous, broken-down wrecks. What a commentary—250 killed, and now, at this date, more than two thousand dead from disease and more than 50,000 lying ill with fever or invalided? Not only has disease struck with deadly force on the combatant arm of the service, but it has played havoc with the doctors, as we now learn from the Surgeon General's office that more than 75 per cent. of the medical division which went to Cuba is either dead or invalided.

The Government has done well to give little heed to the noisy clamor of the sensational newspapers, in the meantime sparing nothing to provide with all possible speed the needs of our poor, fever-stricken army.

An important and valuable lesson has been taught our nation, and the more thoroughly it is impressed the better, viz., that war is no trifling

amusement, and that "steel can only be met with steel;" that a fighting force of efficiency must be of stuff something more than the evolution of a few weeks. A matured, seasoned, acclimated, and, it might be added, an "alienated" army, requires years to develop. If the recruit must be trained in the manual of arms and military movements, so must his digestive organs be accustomed to the crude, simple diet of the soldier. This is borne out by a statement in the Lancet on condition of the German soldiers now in China, which says:

"There is a hospital at Kiao-Chou for the German troops brought from Germany, but, according to an interesting letter published by the Times from one of its correspondents, the troops are extremely healthy, sickness amounting only to about 2 per cent. in the marines and 1 per cent. in the navy."

It takes five years to make a soldier in France or Germany, to season and harden him, so that the mishaps of a campaign are no inconvenience to him.

If an imperial policy is adopted by our Government then we must begin at once and reorganize a large standing army. Sanitary science must cut a leading figure then in dealing with the many important questions that burden the Government. Immunization, acclimatization and prophylaxis, then, must be our main reliance to prevent a repetition of the humiliating spectacle at present forced on us.

MAKING USE OF GERMS AS BULLETS.

If we could palm off the Medical Department of our army on a foreign foe it would be a great thing for this country.

The tenth annual meeting of the Tri-State Medical Society, of Alabama, Georgia and Tennessee, will be held at Birmingham, Ala., on Tuesday, Wednesday and Thursday, October 25, 26 and 27, 1898.

A HINT ON THE TREATMENT OF HEADACHES.

It is a familiar axiom that in union there is strength, and this often applies as much to drugs as other things, for it is frequently found that by joining two drugs having similar effects much better results may be obtained than from one given singly. For instance, while caffeine has been found a most desirable remedy in the treatment of certain forms of headache, its beneficial effect may be greatly enhanced by associating it with another analgesic. A large number of preparations of this kind have been introduced, but one to which especial attention is called here, on account of its uniformly good results, is Hemicranin, a mixture of caffeine and phenacetin. In view of the fact that the latter drug has for many years enjoyed great popularity its association with so valuable a cardiac stimulant and antineuralgic as caffeine furnishes an ideal preparation for the treatment of many forms of headache. Hemicranin has fully justified the expectation of its value, based upon its chemical composition, and is highly recommended, even in cases where other drugs have proved unsuccessful.

Clinical Medicine.

In charge of DR. J. J. MORRISSEY.

THE DIFFERENTIAL DIAGNOSIS BETWEEN PROGRESSIVE AND ALCOHOLIC PARALYSIS.

Maradon de Montyel (Rev. de Med., February, 1898) says that in the stage of commencing paralysis progressive general paralysis bears such resemblance to that form of so-called alcoholic paralysis which occasionally supervenes in the course of chronic alcoholism that the most experienced alienists have given a diagnosis and prognosis of cases as being general paralysis which have been contradicted by the subsequent course—especially by their recovery after a few weeks. The most prominent sign in the differential diagnosis is the mode of onset, which in general paralysis is known to be gradual and insidious, while the alcoholic form commences suddenly. The moral alteration in the latter is very remarkable. The typical general paralytic, on the other hand, still exhibits in the midst of his intellectual ruin transitory noble feelings. The psychical phenomena are more to be depended on than either the physical or intellectual for the elucidation of these diseases.

In the issue of the "Times and Register" for August 27 the difficulties accompanying the differential diagnosis of multiple neuritis and locomotor ataxia were dwelt upon and the statement made that frequently a diagnosis of the more formidable disease was made, and a month or two afterward an alcoholic neuritis was cured.

We see that abroad the same difficulties oftentimes exist between general paralysis and that of alcoholic origin. The "man of the future" in medicine is the skilled diagnostician, and the more closely we adhere to facts, and the further away we keep from theories, the closer do we approach scientific medicine, upon which diagnosis must be based.

J. J. M.

IMMUNITY AGAINST DISEASE.

The magnificent address in medicine which Sir Thomas Fraser delivered at the recent meeting of the British Medical Association is among the notable events which characterized that great assembly of medical men.

It was comprehensive, clear and succinct, and accompanied with the fruits of much original research which served to illuminate many of the vexed questions constantly arising in these days of rapid scientific investigation.

Medicine no longer lives in the esthetic realms of pure art—it has become a science based upon unchangeable principles. The progress that has accompanied its development during the past quarter of a century has been solely due to scientific research, and this has been mainly directed toward the prevention of disease. In order that successful treatment might follow accurate diagnosis the cultivation of the latter has been pursued with an avidity that reflects great credit upon the profession.

The principal question which the learned author discussed was that of immunity, why some diseases protected against a secondary invasion while others offered a protection merely for a space of time more or less unknown. Our continental brethren have been striving to answer this question for some years, but it still remains an unsettled

problem. The mystery surrounding immunity has not been entirely cleared up, and whether it depends upon some biological entity yet unknown remains to be discovered. We do not as yet know why smallpox, for example, protects its victims if it spares their lives, while diphtheria appears to render the invaded system more susceptible to its further ravages. There may be immunity of two kinds, namely, that produced by the disease and secondly, that procured by the introduction of increasing doses of toxines.

The temporary protection afforded by the latter can only be explained on the basis of the rapid elimination of the antitoxic bodies furnished by the toxines; the disease itself, while it has lost its virulence, still possesses sufficient power to generate antitoxic properties, which successfully cope with the toxines of a renewed invasion. The life history of these bodies is unknown, so that practically we do not know the length of time over which their protective power reaches.

Dr. Fraser believes that in the immunity following infectious diseases small quantities of antitoxin are being constantly supplied to the system.

The whole subject is yet in nubibus and well worthy of further investigation upon the part of scientific students. J. J. M.

DIETETICS OF HEART DISEASE.

At the recent annual meeting of the American Medical Association R. H. Babcock, of Chicago, referred to the vicious circle established between indigestion and heart disease. Venous stasis of stomach, intestines, pancreas, gall ducts and liver intensified the difficulties of nourishment under these conditions. Not only was digestion impaired, but the glycogenic, urea-forming and protective functions of the liver were added to the problem. Anemia was thus added, also uric acid accumulation in the system and deficient general oxidation. Two classes of cases were to be considered: (a) Those in which compensation was present; (b) those in which compensation was lessened or lost. In the second class the dietary must be restricted. The "gone" feeling and thirst in these cases were no indication for food. Food should not be given too often, but at intervals of five or six hours. The stomach was to be spared, and the symptoms would improve. If necessary somatose, nutrose, or even nutrient enemata might be given. Hot water before meals was useful. The amount of fluid taken with meals should be restricted. In the presence of oedema it should be reduced to a minimum. This included milk also. Starch, sugars and fats were bad, owing to their tendency to cause flatulency and post-prandial pressure. Proteids were best. Apples, peas, beans, meats, oysters were all good. When nephritis complicated it, milk was to be used; when arteriosclerosis was present no food containing much calcium salts should be taken.

There is no class of diseases which requires so much special study upon the part of the physician as cardiac affections. The intimate relationship existing between the heart and the remotest portions of the human system should be ever borne in mind. We might also add that in these affections the proper use of common sense will do more for the patient than the latest so-called cardiac "tonics." Too much emphasis cannot be placed upon the valuable suggestions of Dr. Babcock, whose wide experience and comprehensive views, combined with excellent diagnostic power, eminently fit him to speak ex cathedra. The general practitioner is very apt to turn to digitalis in every form of heart difficulty. The question of individualizing the particular case which confronts him scarcely ever occurs to him, to the great disadvantage of the patient. It may be safely said that almost as many people suffering from cardiac disease die from the indiscriminate use of digitalis as from the affection itself.

It is by the judicious application of the common-sense measures which Babcock advocates that much relief can be afforded to those suffering from advanced heart disease.

J. J. M.

CLINICAL SURGERY AND SURGICAL PATHOLOGY

In charge of T. H. MANLEY, M. D., New York

DOES ELECTRICITY KILL INSTANTLY?

BY DR. J. A. O'NEILL,

Assistant Department of Surgery, New York School of Clinical Medicine.

Does the electric current, as employed by the State of New York for inflicting the death penalty, produce absolute death or only temporary unconsciousness? In other words, is the body that is cut to pieces by the surgeons who do the autopsy simply lifeless clay, or is it a tortured, sensitive human being, rendered powerless to resist by the electric shock?

Beyond the superficial burns where the electrodes come in contact with the skin there is no evidence of electrical injury, and because the autopsy reveals no cause of death many eminent medical men say that the victim is really alive until disemboweled by the surgeon's knife, and that all methods of resuscitation should be tried before beginning the autopsy.

With a view to settling this disputed question the World asked me to attend the Thorn execution. I took with me a phonendoscope, a thermometer, an opthalmoscope and other delicate instruments for determining the presence of life. In addition to these I carried such powerful restoratives as brandy, strychnine, nitro-glycerine, etc., and a hypodermic syringe with which to administer them. I intended either to revive Thorn or to make sure that he was dead before mutilation should begin.

The World asked me to make a careful physical examination of the doomed man, both before and after execution. To do so before was impossible, as the law forbids any but the prison physician to see condemned prisoners just before execution. Dr. Irvine, however, gave me the results of his examination. "The only thing about Thorn at all abnormal," he said, "is a rapid pulse, suggestive of smoker's heart, yet Thorn does not use tobacco. He slept well, ate well and was not at all hysterical nor emotional. He has gained about 15 pounds since his arrival at Sing Sing."

When Thorn walked into the death chamber he was pale, his lips parched and slightly parted. His eyes swept the room in a frightened way and then turned toward the floor and remained cast down. His knees did not tremble as he walked to the chair, and he gave no sign of emotion. He voluntarily moved his right leg into a position to facilitate the application of the electrode.

Warden Sage made a sign to the electrician and immediately Thorn sprang forward and remained rigid for 60 seconds when the current was turned off and he sank limp in the chair as far as the straps would permit. There was a blowing sound like the neigh of a horse, saliva came from his mouth, and the carotid artery in the neck began to pulsate.

Dr. Irvine placed his finger on the artery and then made a hurried sign to the electrician. Again Thorn's body became rigid, his mouth opened and his hands, which had become blue, again assumed their living color. For half a minute this second current was maintained, and then I was allowed to make an examination.

I asked Warden Sage if I might apply restoratives, but he said the law would not permit any attempt at resuscitation, although he said I

might make any reasonable tests to assure myself that Thorn was really dead.

Placing my stethoscope against Thorn's chest I listened carefully for the heart beat, but there was no sound. I placed my finger on the carotid artery and felt a slight thrill. As I raised his eyelids and touched the eyeball there was a slight contraction of the right pupil. The thermometer placed in his mouth registered a temperature of 104.5 degrees. The involuntary muscles were still active, and contracted upon irritation. On the calf of the right leg there was a burn as large as my hand, and the temperature there was 110 degrees. The right leg was partially flexed and very rigid, a pseudo rigor mortis due to the coagulation of the albuminous fluids by the intense heat. The rest of the body was perfectly limp and the blood did not coagulate. Two attendants carried Thorn from the chair to the autopsy room, and an hour later Drs. McAllister, Brooke and Goodwin began the post-mortem examination.

The brain was first examined, but was found to be perfectly normal. The abdominal viscera were intact and the lungs showed only a few old adhesions of many years' standing. The heart had stopped while the left ventricle was contracted, and was therefore empty. One by one the vital organs were dissected, yet not a single lesion was found that could have caused Thorn's death. Conditions warranted attempt at resuscitation.

Decomposition is the only absolute sign of death, but this sign was absent in Thorn's case. On the other hand, there were several signs that under different conditions would be interpreted as evidence of life. The thrill in the artery,the sensitive pupil and the muscular irritability would certainly warrant an attempt at resuscitation in a man not legally dead. It may be that the apparent pulsation in the artery was caused by the gravitation of the blood from the head to the trunk, but gravitation will not account for the contraction of the pupil nor the reflex action of the muscles. There is no doubt that Thorn is dead now, and that in fulfillment of the decree of the Courts he died "during the week beginning August 1," but if required to state the precise time of death I should be very reluctant to sign his death certificate.

Note.—A more appropriate title for the above timely and scientific contribution would be "Was Thorn Killed by Electricity or by the Dissectors' Knives?"

With this report before us no one will repeat the mockery of inquiring "is electricity either painless or humane?"

TREATMENT OF TUBERCULOUS ARTHRITIS BY BLOODLESS METHODS.

Calot (Berck) dealt with this subject. He said the best treatment of cold abscesses is not a so-called radical operative procedure, which is often disappointing in its results, and which always causes too great a loss of substance, nor is the expectant method the best. As in the case of cold abscesses in general the treatment which most surely cures white swellings and leaves the most serviceable limb is unquestionably puncture, followed by a modifying injection into the interior of the joint. Of 40 cases of white swelling cure was effected in 39 by this method alone. In a single case, that of a man of 30 who had a white swelling of five years' standing, Calot had, owing to anatomical peculiarities which made the application difficult, to have recourse later to arthrectomy. The orthopedic results of the bloodless method have been extremely remarkable. Not only have the limbs kept their shape, length and solidity, but in nearly one-fourth of the cases the joints have entirely, or almost entirely, recovered their movements. Calot looks for still better results from the orthopedic point of view, as he proposes in future to direct his efforts to the restoration of movements; hitherto he has not done this, restoration having taken place spontaneously, without any interference on his part. The technique of the injections is the same as in the case of cold abscess; the liquid used for the purpose is also the same. Calot

prefers camphorated naphthol, which he injects in small quantities, the dose being from one to 10 grains, according to the age of the patient. He begins by injecting camphorated naphthol after emptying the joint, at intervals of two or three days. After the eighth injection of naphthol he injects ether and iodoform twice. Then, having on two or three occasions completely emptied the joint of the liquid which it continues to secrete for some time after the last injection, he applies compression with plaster over cotton wool. The period of injections lasts from 25 to 30 days; that of compression lasts three or four weeks, after which the patient is discharged. In the case of a dry, white swelling, the first four or five injections of naphthol into the synovial sac cause its walls to secrete a brownish serosity, which brings the case into line with those of ordinary swelling. When a fistula exists the duration of treatment is longer. A cure is often effected by injections made in such a manner that the liquid remains in the passage. In connection with this subject Calot takes occasion to point out that the existence of a fistula is always attributable to the medical practitioner who has had charge of the case; such a condition ought never to be present.

Courdray (Paris) said the conservative treatment of tuberculous joint disease by rest, immobilization and compression was not only intolerably tedious, but not always sure. Except as regards the hip, where extension is the procedure of election, the tuberculous focus should be attacked directly. For this purpose he preferred the method of "sclerogenic" injections introduced by Lannelongue. By this means he had obtained excellent results in 64 cases of articular tuberculosis, especially when he was able to intervene in the first months of the disease. Success was particularly marked in the white swellings of the knee. The method was not applicable to lesions of the hip or of the vertebral column, the diseased parts being inaccessible by reason of their depth and the uncertainty as regards the exact situation of the focus.

Redard (Paris) said that in the conservative treatment of tuberculous arthritis he employed intra-articular injections of olive oil containing 5 or 10 per cent. of iodoform. He preferred this preparation to iodoform and ether, which caused very painful distension and sometimes gangrene of the skin. He recommended that injections should be made around the joint into the fungating masses, and around and into the fistulous tracts. As regards white swelling of the knee he had obtained complete success in 60 per cent. of the cases; as regards other joints, in 40 per cent. This method, better than any other, insured the preservation of movements in the affected joints. Cold abscesses were amenable to the same treatment, and Redard said that in this category he had had 70 per cent. of successes. He pointed out that care must be taken before the iodoform oil is injected to wash out the cavity with a solution of naphthol beta. Oxygenated serum prepared with phosphate of soda and bi-oxide of hydrogen had been successful in his hands in cases accompanied with fistula, in which iodoform oil generally failed. The serum was attended with the drawback that it caused distension of the cavity by liberation of gases, but the distension was less than after the use of iodoform and ether.

—The British Medical Journal.

SURGICAL TREATMENT OF TUBERCULOSIS OF THE BLADDER.

In a communication of this subject E. Desmos (Paris) said that, although tuberculosis of the urinary passages often remains localized to the organ originally attacked, operative procedures, such as curetting or total resection of the vesical mucous membrane were generally followed by no good result, and were sometimes followed by generalization of the infection throughout the urinary apparatus. Nevertheless, painful forms of tuberculosis cystitis can often be dealt with satisfactorily by suprapubic cystotomy, but in these circumstances care must be taken to leave the vesical mucous membrane untouched, whatever les-

ions it may present; the operator must be content with draining the bladder. If the patient is willing to put up with the inconvenience of a fistula for a long time—at least a year—not only does the pain diminish or cease altogether, but nearly all the lesions undergo a temporary arrest, owing to the permanent relief of the congestion of the bladder walls and the abolition of micturition through the natural passage. When operation of any kind is contraindicated recourse must be had to instillations of sublimate and injections of guaiacolated oil, and to general treatment.

—The British Medical Journal.

SPASMODIC STRICTURE OF THE ESOPHAGUS.

Sir:—I have been much interested by Dr. Russel's paper in the British Medical Journal of June 4 on spasmodic stricture of the esophagus at or near the cardiac orifice of the stomach. During a long residence in the West Indies I met with several cases of this nature, and all of them appeared to be connected with malaria, as is possible two of Dr. Russel's may have been—that of the surgeon in the colonial service and the retired naval officer.

My attention was first directed to the complaint by being myself the subject of it. In 1870 I had a most severe attack of malarial remittent fever, and during convalescence suffered for several days from the following symptoms: Fluid food could be swallowed without much pain or difficulty, but solid food occasioned much pain in the lower half of the esophagus, which, when the cardiac orifice was attained, became most intense. After several seconds had elapsed I could feel the morsel of food slowly dilating the cardiac orifice, and the pain then became agonizing, until at last I could feel it pass slowly through, and comparative relief followed, although a sensation of soreness continued for some time. I subsequently had several cases of a similar nature while in the West Indies, all of them associated with malaria, and in some of them the symptoms were distinctly intermittent in their occurrence. I have also since coming to this country been consulted for the same symptoms by a gentleman who had spent many years abroad in a malarial locality.

It is somewhat singular that Dr. Russel's cases, with one exception, all lived within a radius of less than 40 miles, and I would suggest inquiry as to whether malarial influences might not have had something to do with their occurrence.

I may add that all the symptoms were soon relieved, and in a few days entirely disappeared under full doses of tinct. belladonnae and liq. arsenicalis. I am, etc., Izett Anderson, M. D., Eastbourne, June 6.

—The British Medical Journal.

DISCUSSION ON THE TREATMENT OF ELBOW FRACTURE.

BRITISH MEDICAL ASSOCIATION, August, 1895.

Dr. Roberts, of Philadelphia, said that he had found the ankylosis after fractures into the elbow joint was due to imperfect reduction and fixation of the fragments. The consequent alteration in the shape of the articulating surfaces constituted a mechanical obstacle to mobility. After severe fractures mobility was promptly regained when the movements of the olecranon and radius on the humerus were not obstructed by bony deposits. Hemorrhagic effusions into the joint and adhesions were relatively unimportant as causes of ankylosis. The conservation of the normal angle between the lower end of the humerus and the ulna was of importance, because if this was much altered there was a loss of carrying power. This "gunstock" deformity was caused by displacement of one condyle, causing valgus or varus of the part, just as in Ogston's operation for knock-knee the condyle was slid upward and the angle between thigh and leg altered. However, in the elbow fortunately slight alterations of this angle did not affect the usefulness of the limb, but it was the surgeon's duty to restore anatomical symmetry as far as possible, as well as usefulness. The method that he had found most effective and now generally employed was that of fixing the

fragments with long nickeled steel nails. Occasionally deformity and limitation of movement were due, not to imperfect reduction, but to imperfect fixation, of the reduced fragments, so that they slipped out of position again. Nailing prevented this. He used special steel nails with a head, to which a handle fitted. With this handle the nail was thrust through the skin and into the bone; the handle was then removed and the nail driven home by means of a hammer. Meanwhile the parts were held accurately in position by an assistant. Common wire nails would do in an emergency, but they were not sharp enough and not tempered properly. Skiagraphs were most important to determine position of fragments and the direction in which the nails should be driven. The speaker showed skiagraphs of several cases after nailing, three long nails right across the joint in different directions being used in a severe case. In cases of doubtful nature an exploratory incision was advisable, and should be much oftener practiced than was general. The best incision was one on the anterior outer aspect of the joint, turning up a flap of the biceps and supinator longus. The not quite fully extended position was that in which he generally put up his cases. In cases of stiffness and uselessness after fracture he recommended refracture and replacement.

Professor Chiene said that there were three positions in which we could treat injuries of the elbow joint. He used them all. When for any reason the recumbent position was necessary he used the extended position with weight-and-pulley extension of the hand and forearm. In fractured olecranon with displacement of the fragment, he used the same position with elastic traction on a splint, but in fractured olecranon without displacement he put the forearm in a sling. All other cases he treated in the fully flexed position, using no pad in front of the elbow, but only a layer of lint to keep skin from touching skin. In this position the stretched triceps acted as a splint. In some cases, also, he bandaged the forearm to the chest, which thus acted as a splint, keeping skin from directly touching skin. Massage after one week, movement after ten days in all cases.

Mr. T. Bryant agreed with Professor Bennett's explanation of the escape of the joint in many cases of compound separation of the epiphysis of the humerus. In this injury, when not compound, effusion took place between the bone and the periosteum and made clear what had happened. He thought there was no need to remove the end of the shaft in the compound injury. The extended position was the best for examination of the elbow; the bony points and their relative situations could be best made out in that position. In a large number of cases the extended position was the best for treatment. In general he indorsed Mr. Chiene's remarks.

Dr. Kennedy Dalziel said that fractures into the elbow were caused generally by falls on the outstretched hand. Such a fall produced either a Colles' fracture, a fracture or dislocation of the elbow, or an injury of the shoulder, according to the direction of the force and other circumstances. The force of the fall was transmitted upward and outward from the inner side of the capitellum through the lower end of the humerus, and fracture occurred in this line. Commonly the fragment was displaced upward and rotated, as shown by skiagraphs, so that the capitellar surface came to be applied to the fractured surface of the humerus. There might be excessive formation of bone with resulting ankylosis, or there might be nonunion. In the latter cases the disproportionate growth of the healthy inner condyle caused displacement of the forearm outward, and gunstock deformity followed. One-third of the cases of fracture at the elbow joint in your subjects were of this nature. It was not displacement of the epiphysis, but a true fracture, and occurred only before puberty. Nailing he believed to be a correct method of treatment. He had wired the fragment, but this involved leaving a foreign body in the joint, which was not advisable.

Mr. C. B. Keetley could not agree

with Professor Bennett as to cause of non-suppuration in compound dislocation of the epiphysis. He thought it scarcely possible for the periosteum to protect the joint in the manner suggested. A good deal would depend on when infection occurred. If, as he thought, this was generally due to some carelessness of a house surgeon or dresser a day or two after injury, then the joint cavity might already be shut off by adhesions. It was important to have a free exit for pus. It was remarkable how joints seemed to protect themselves. He quite agreed with Dr. Roberts that displaced bone was a great cause of ankylosis, but he disagreed with him as to the need of nailing. The objections offered to the use of wire he had never found valid in practice. Fragments were seldom completely detached from soft parts, and, moreover, the irregularities of the fractured surface would keep the fragments in place when once reduced. He would state it as an axiom that all fragments should be cut down at once and wired. In dislocation, if the head of the radius could not be reduced it should be removed. In a case in point, that of a boy of 14 years, there was fracture of the external condyle. He cut down on it and found the detached condyle turned upside down and inside out, with the fractured surface toward the skin. He wired it with excellent result. Obviously no other treatment but exploration could have corrected this properly. Splints, massage and passive exercises would all have been useless. He did not think the latter means of much value in any case. Patients would not submit to passive movement when it hurt them, but if the displacement was corrected they might be trusted to exercise the joint of their own accord. The head of the radius was often thought to be the cause of obstruction, but it was very easy to be mistaken. He related a case in point, in which the olecranon was found to be in fault instead, and a wedge was removed from it.

Mr. Jordan Lloyd said that fractures were often mistaken for dislocations. He believed that dislocations of the elbow are very rare. The majority of cases so called were cases of cleavage fracture of the lower end of the humerus, usually caused by falls on the elbow. Fracture of the olecranon in the young was extremely rare. At ages under 25 the humerus broke instead. He explained by means of a diagram the manner in which the olecranon acted as a wedge and split the humerus. The direction of the force either outward or inward, as well as upward determined which condyle suffered most. These injuries were often overlooked, because in doubtful cases examination under anesthesia was not regularly resorted to or the X-raps were not used. Often we must defer diagnosis until swelling had gone. He deprecated haste and did not think nailing was to be recommended, partly because even the best of us were not absolutely certain of asepsis, and because excellent results could be obtained without nails. He thought it would be most unfortunate if this meeting sanctioned the idea that nailing should be the routine treatment. Mr. Chiene's plan of using the body as a splint was an excellent one. The speaker had also got good results by treatment in the extended position. Stiffness was often caused by passive motion. He did not believe in its usefulness. Far more harm was done by it than by too long rest, which allowed complete consolidation. He had seen the elbow immobilized for six weeks or more, with excellent results. There was a form of fracture of the olecranon in the adult, due to a fall on it with dislocation, which was difficult to reduce. He had already described this injury, which consisted of a narrowing of the sigmoid notch caused by incomplete fracture with crushing together of part of the joint surface of the process, the periosteum acting as a hinge. For this injury operation was needed to restore the sigmoid cavity.

Professor Bennett in reply said that immediate diagnosis was important. He deprecated the general use of nails and screws.

The president said that the difficulty of reducing and controlling small

fragments rendered treatment often unsatisfactory. The position in which the fragments were easiest put and kept right was the most useful in treatment. He was astonished that massage had not been mentioned. He believed it to be most valuable in treatment, provided that the fragments were secured in position. Passive motion was useful if correctly applied after an interval, but it must be gently and discreetly used. By passive motion he meant flexing the joint as far as possible once in the morning and extension once in the evening; no more.

INTESTINAL OBSTRUCTION.

Professor Kocher, of Berne, then read a paper on intestinal obstruction. Out of 77 cases 26 were malignant, of which 24 were operated on, mostly by extensive resection. In the 20 the patients were still alive. Localized tuberculosis of the gut was somewhat common in Switzerland. Of 90 cases of this he had operated in 18 cases by resection of the whole diseased part. In 16 the patients had recovered and two had died. He had operated on six cases of intussusception by resection of all the folds of gut involved. All the patients recovered, and in one only a fistula remained. Every case of obstruction should be submitted to the surgeon at once, that he might decide as to whether the operation was needed, early operation being most important; but the surgeon should employ every means in his power besides operation, and one of the most valuable of these was consultation with a good physician.

Note.—Elbow joint fractures in the adult are always serious lesions the varying degrees of gravity depending upon the extent of damage and the special anatomical structures involved. The great issue in their treatment is whether or not passive motion should be employed. Spiking or wiring these fragments in any other than special cases is a procedure of doubtful utility.

It is unfortunate that none of the distinguished speakers above cited made any allusion to the great importance of local treatment over the tumified parts until all hemorrhagic or inflammatory effusion is absorbed.

T. H. M.

—Medical Record, Aug. 27, 1898.

MELANCHOLY STATISTICS.

In colonial wars, which are often waged by race against race, the terrible mortality which accompanies them is rather from an inhospitable climate than the field of battle. As a sad demonstration of this we may cite the dreadful lethality among the Spanish troops in Cuba during the year 1897.

Deaths from yellow fever....	6,034
Deaths from typhoid fever ...	2,500
Deaths from dysentery fever..	12,000
Deaths from intermittent fever	7,000
Deaths from other maladies..	5,000
Total	32,534

Dr. Brunner, the Inspector General of the army, also declares that of the 30,000 convalescents sent home during the year a mortality of more than 10 per cent. followed.

What lugubrious statistics?

—L'Echo Du Nord, Aug. 20, 1898.

Note.—These statistics should lock the jaws of our American howlers and sensationalists. The climate of Cuba had palsied and blighted the Spanish army, had so crippled it that it was powerless to cope with little more than a disorganized mob of insurgents. Nor indeed, when our handful of raw troops arrived was it able to meet them in a single general engagement.

The miasmatic atmosphere of Cuba had enervated and consumed the vitality of the Spaniards, and they knew well that another summer's campaign meant for them an enormous sacrifice of life from tropical diseases.

But where was its commissariat and medical departments?

Evidently under the destructive effects of atmospheric and climatic influences, where ours were; no doubt in evidence; but all human efforts avail little when circumstances and environment favor the spread of pestilential diseases.

The succor or hope for Spain's army lay in speedy evacuation of Cuba, but their troops' departure was not as precipitate as ours, the

larger part of whom had not participated in any engagement, nor were even on the island a single month. T. H. M.

CURE OF EXTROPHY OF THE BLADDER CURED BY COLO-CYSTOTOMY.

BY DR. M. LE TUFFIER.

Tuffier well notices that extrophy of the bladder is not only a most important and disgusting infirmity, but, at the same time, is successfully treated with the greatest difficulty. Of late it has been shown that the large intestine tolerates the presence of urine very well. Some time since Mayde successfully performed a cystocolotomy for this condition, with a good result. On February 12, 1898, Tuffier operated on a most severe case of extrophy of the bladder by closing the anterior breach and turning the urine into the rectum, by joining the bladder to the rectum through an anastomatic portal. Result has been entirely satisfactory. The patient now defecates three or four times in 24 hours, and is perfectly cured of the deformity.

—Gaz. Heb., Juillet, 1898.

FOUR CASES OF PERITONITIS TREATED BY RECTAL INCISION.

BY M. JABOULAY.

This author records three interesting cases, evidently of suppurating appendicitis, treated by rectal incision, irrigation and drainage; one dying later from complications.

The author emphasizes the importance of always exploring the rectum in cases of suspected purulent accumulation from any cause in the lower abdomen or pelvis.

Having discovered evidence of deep lodgment of pus contiguous with the lower rectum, the anus is widely dilated and thoroughly cleansed by large irrigation, when a rectotomy is performed; the incision is enlarged with the index and all pus well drained off. After escape of pus a gauze drain is inserted and the case treated on general principles.

This method of drainage is similar to that secured by colpotomy in the female pelvis.

Note.—In 1881 Byford demonstrated how many pelvic accumulations might be safely carried off by the rectum or the vagina, and at an earlier epoch Thomas described in extenso vaginal drainage. Delbet later employed the rectal route of drainage in pelvic disease, and here in America Gibney has shown that the results of lumbar drainage are very much the best by way of the rectum. Chassaignac declared that the rectum was by all odds the most natural emitory for all pus accumulations in the pelvis, from whatever cause. Kocrite has found that in rectal evacuation of pus there is less shock, and more rapid recovery when we drain by the fundament.

Precautions to be observed are, first, that the bladder be well emptied.

Secondly, that the peritoneal cavity is not opened.

Third, that all the pockets are well opened.

Fourth, that a drain be maintained until all residual elements of inflammation and infection are carried away.

—Gazette Heb., Juilliet, 1898.